REMARKS

Reconsideration of the objection and the rejections set forth in the Office Action dated January 14, 2005, is respectfully requested. The Examiner rejected claims 5-9. Applicants have amended claims 5-9. Accordingly, claims 5-9 remain pending in the application. No new matter has been added by these amendments as can be confirmed by the Examiner.

A. <u>The Drawings Do Not Comprise Printed Publications Under 35 U.S.C. § 102(b) and Therefore Do Not Qualify as Prior Art to the Present Application.</u>

In the Office Action, the Examiner notes that Fig. 1 of the drawings includes a caption "05/28/99 V1.6 Drawn by Peter Tannenbaum" and proposes that Fig. 1, as well as possibly Fig. 2, be amended to include a legend to identify the drawings as "Prior Art."

35 U.S.C. § 102(b) however provides that "[a] person shall be entitled to a patent unless [the] invention was patented or described in a **printed _publication_** in this or a foreign country ... more than one year prior to the date of the application for patent in the United States." (emphasis added) In other words, the drawings might qualify as prior art if, and only if, the drawings were available to the public for more than one year before the September 6, 2000, filing date of the present application. Since the drawings comprise internal documents and were never publicly disclosed, neither Fig. 1 nor Fig. 2 comprise a printed publication under 35 U.S.C. § 102(b).

Therefore, it is submitted that the drawings are not prior art to the present application and that amendment to the drawings is not required. Applicants respectfully request that the Examiner withdraw his objections to the drawings.

B. <u>Claims 5-9 Have Been Amended to Point Out with More Particularly and to More Distinctly Claim the Hierarchical Nature of the Emulation Engine.</u>

The Examiner asserts that the Emulation Engine recited in claims 5-9 are indefinite for failing to particularly point out and distinctly claim the subject matter that

Applicants regard as the invention. In particular, the Examiner alleges that the "apparently hierarchical structure of the claimed invention is not clear" and requests that the hierarchy be claimed sequentially from the top down or from the bottom up.

Without acquiescing, Applicants have amended claims 5-9 to more clearly set forth the hierarchical nature of the claimed emulation engine. Independent claims 5, 7, and 9, as amended, recite an emulation engine in a top down hierarchy as suggested by the Examiner. The claimed emulation engine includes a plurality of clusters. Each of the clusters, in turn, includes a data memory and a plurality of processors for executing logic gate functions from a logic design. The claimed emulation engine likewise has one or more time division multiplexers. Thereby, the plurality of clusters and the time division multiplexers verify a functionality of the logic design. Claims 6 and 8 depend from claims 5 and 7, respectively, and have been amended to more clearly set forth the operating clock rates of the data memory and the processors and to be consistent with claims 5 and 7, as amended.

According, it is submitted that the hierarchical manner in which the emulation engine is recited in claims 5-9, as amended, is sufficiently particular and distinct such that claims 5-9 are in condition for allowance.

C. Staros Does Not Disclose or Suggest the Use of Clusters of Processors for Executing Logic Gate Functions from a Logic Design and, in Conjunction with Time Division Multiplexers, for Verifying a Functionality of the Logic Design in Accordance with Amended Claims 5-9.

The Examiner rejected claims 5-9 under 35 U.S.C. § 102(b) as allegedly being anticipated by Staros, United States Patent No. 5,708,850. Applicants respectfully submit, however that, by failing to disclose each and every element of amended independent claims 5, 7, and 9, Staros does not anticipate claims 5, 7, and 9, as amended. Therefore, it is submitted that claims 5, 7, and 9, as well as claims 6 and 8 that depend thereon, are in condition for allowance.

In contrast to the emulation engine recited in amended claims 5-9, Staros does not disclose or suggest the use of clusters of "processors for executing logic gate functions from a logic design". Staros likewise does not teach one or more time division multiplexers that are associated with each cluster of processors and that are coupled to the read ports of the processors within the clusters. Further, the clusters of processors and the time division multiplexers are recited in claims 5-9, as amended, as being configured to verify a functionality of the logic design. Staros however discloses no such feature and, in fact, is directed to digital signal processing, which one having ordinary skill in the art would recognize does not have anything to do with verifying the functionality of a logic design. Amended claims 5-9 moreover require that the read ports of the processors be coupled with the time division multiplexer in each cluster in contrast with Staros in which the read ports of the digital signal processor 102 are connected to a memory device 104 such that the memory device 102 in Staros is coupled with a time multiplexed bus as seen in Fig. 4.

At least one recited element of claims 5, 7, and 9, as amended, therefore is totally missing from Staros. In accordance with M.P.E.P. § 2131, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). The disclosure of a claim element in a prior art reference, when relied upon to negate patentability, must also be clear and unambiguous. Further, "[t]he identical invention must be shown in as complete detail as contained in the...claim." *Richardson v. Suzuki Motor Corp.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Furthermore, and uniquely important in this case is the requirement that the elements relied on in the prior art reference must be arranged as required by the claim. See *In re Bonds*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990).

Accordingly, since Staros fails to disclose each and every element of independent claims 5, 7, and 9, Staros does not anticipate claims 5-9. Therefore, it is submitted that claims 5-9 are in condition for allowance.

D.   No Motivation Exists to Modify the Teachings of Staros in a Manner that Precludes the Patentability of Amended Claims 5-9 Under 35 U.S.C. § 103.

In accordance with M.P.E.P. § 2142, the Examiner bears the initial burden of establishing a *prima facie* case of obviousness. "To establish a *prima facie* case of obviousness, three basic criteria must be met." (M.P.E.P. § 2143.) First, some suggestion or motivation in the prior art references or in the knowledge of one of ordinary skill in the relevant art must exist to modify or combine the references. Second, if the references are combined, a reasonable expectation of success must be shown. Then, finally, all of the claim limitations must be taught or suggested by one reference or a combination of references. To establish a *prima facie* case of obviousness based on a single reference that does not teach all the elements of a claim, the Examiner must provide a rationale for modifying the teachings of the reference. See *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000), *citing*, *B.F. Goodrich Co. v. Aircraft Breaking Sys. Corp.*, 72 F.3d 1577, 1582, 37 U.S.P.Q.2d 1314, 1318 (Fed. Cir. 1996).

In the manner discussed in more detail above, at least one recited element of claims 5, 7, and 9, as amended, therefore is totally missing from Staros. For example, not only does Staros fail to disclose or suggest the use of clusters of "processors for executing logic gate functions from a logic design," but Staros also does not teach or suggest a combination of clusters of processors and time division multiplexers for verifying a functionality of the logic design. Further, the Examiner does not assert that any teaching or motivation exists in the prior art to modify Staros in a manner that renders amended claims 5-9 obvious. First, the Examiner has not established a *prima facie* case under 35 U.S.C. § 103 because, as shown above, all of the elements of the

pending claims are not found in the cited reference. According, it is submitted that Staros does not render claims 5-9, as amended, obvious. Applicants therefore assert that claims 5-9 are in condition for allowance.

For at least the reasons set forth above, it is submitted that amended claims 5-9 are in condition for allowance. A Notice of Allowance is earnestly solicited. The Examiner is encouraged to contact the undersigned at (949) 567-6700 if there is any way to expedite the prosecution of the present application.

Respectfully submitted,

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